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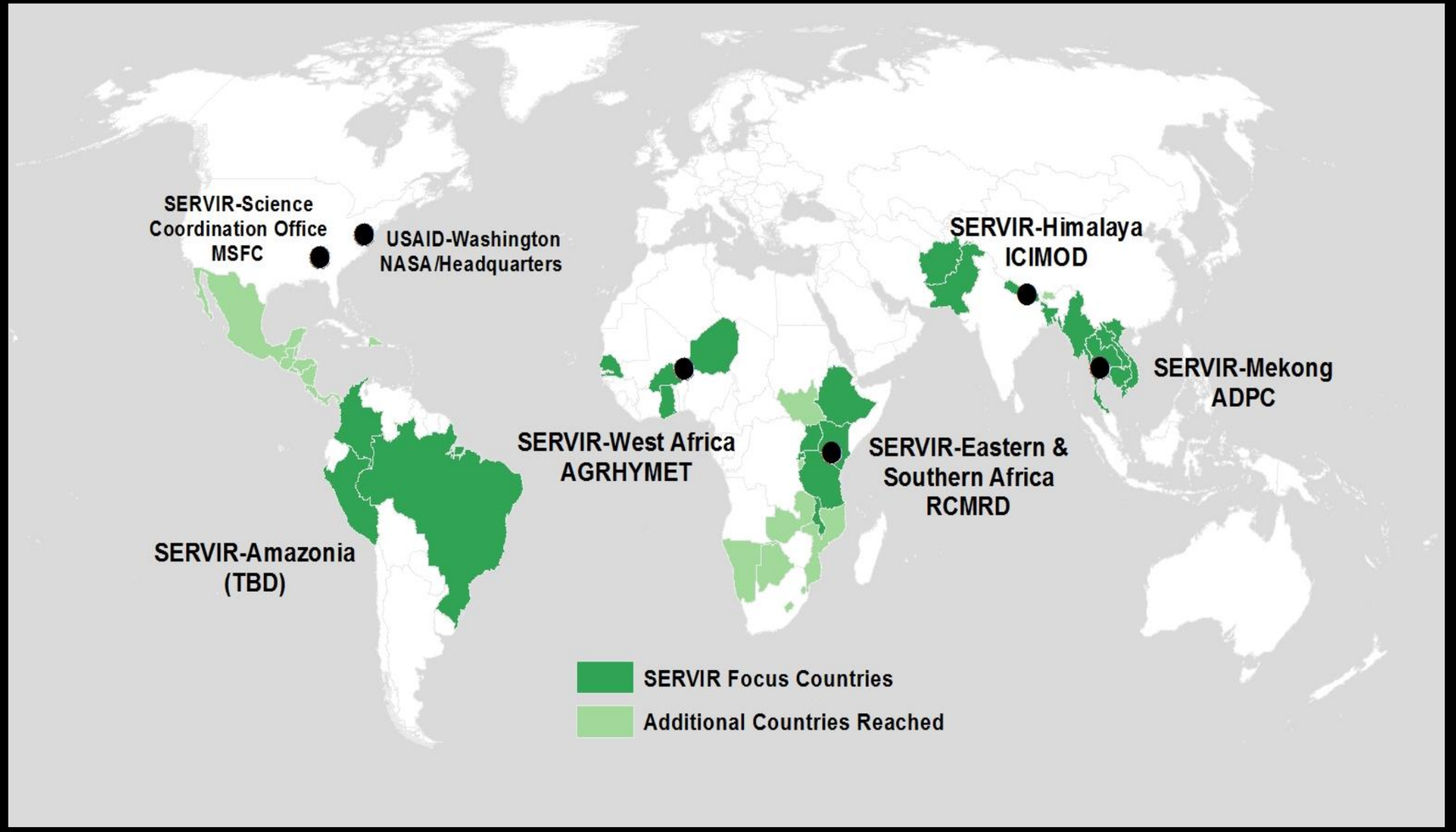

From space, we can view our planet in new ways.

SERVIR empowers people in developing countries to use that view for gaining knowledge and insights about their environments and adaptation to a changing climate.

We work with regional decision-makers to foster use of Earth observation satellite data, GIS, and predictive models for addressing water and land use, natural disasters, agricultural problems, biodiversity, and more.

These tools can improve the lives, livelihoods, safety, and future of people in communities around the world.

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4

REGIONS

45

COUNTRIES

73

DECISION SUPPORT PRODUCTS

260

INSTITUTIONS

SERVIR

27

COLLABORATIVE SCIENCE ACTIVITIES

400

DECISION-MAKERS & SCIENTISTS

3.5K

PEOPLE TRAINED

2.5M

MAP REQUESTS


Lake Atitlán, Guatemala

Algal Bloom returns to Lake Atitlan in August 2015

The Authority for the Sustainable Management of the Lake Atitlan Basin and its Surroundings (AMSCLAE) requested SERVIR's support to monitor the algal bloom that reappeared in August 2015.

Using an algorithm developed by SERVIR in 2013 in collaboration with Universidad del Valle, AMSCLAE, and the University of Alabama in Huntsville, researchers were able to estimate Chlorophyll a (Chl a) concentrations from the current satellite images portraying the bloom.

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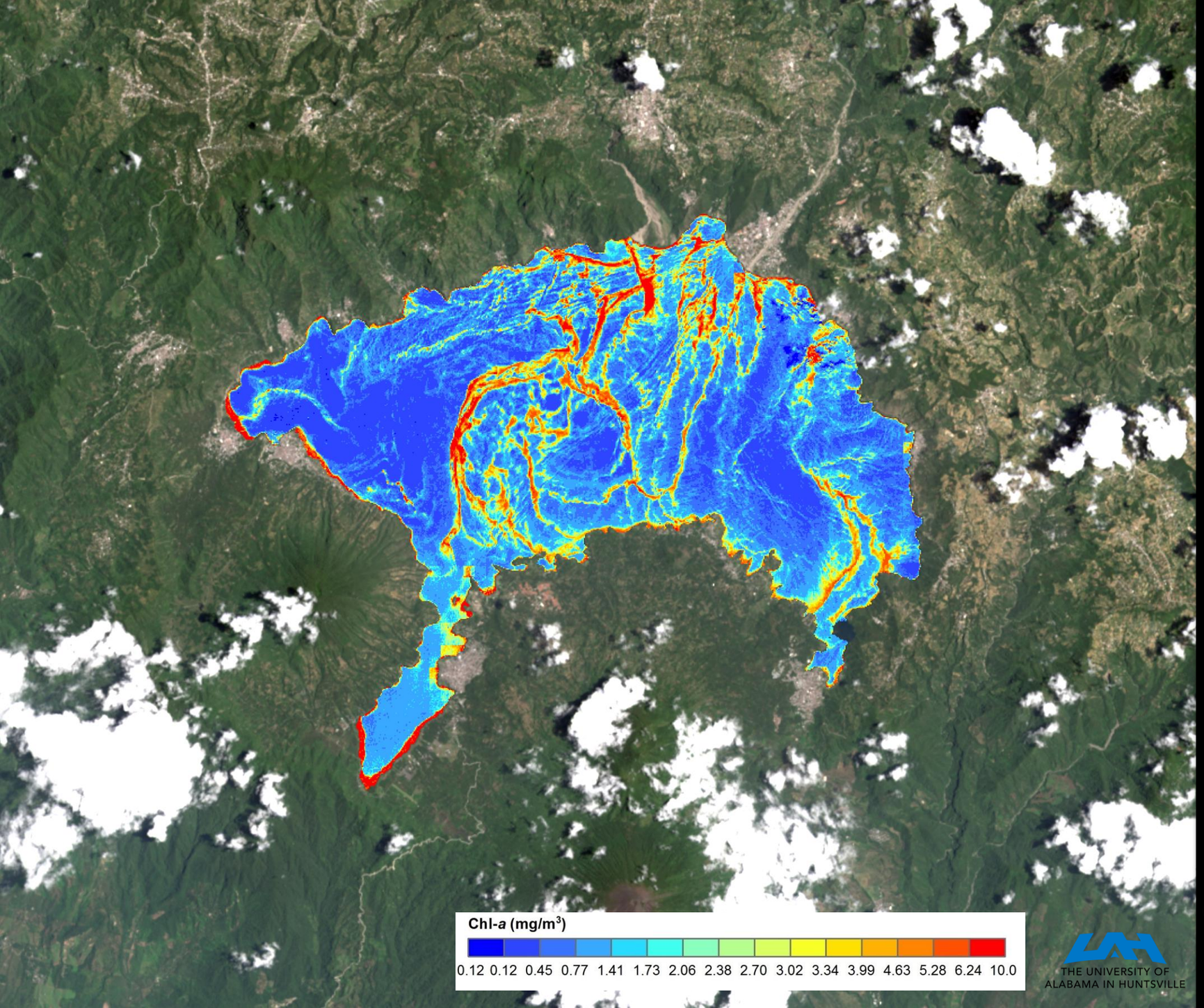

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THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

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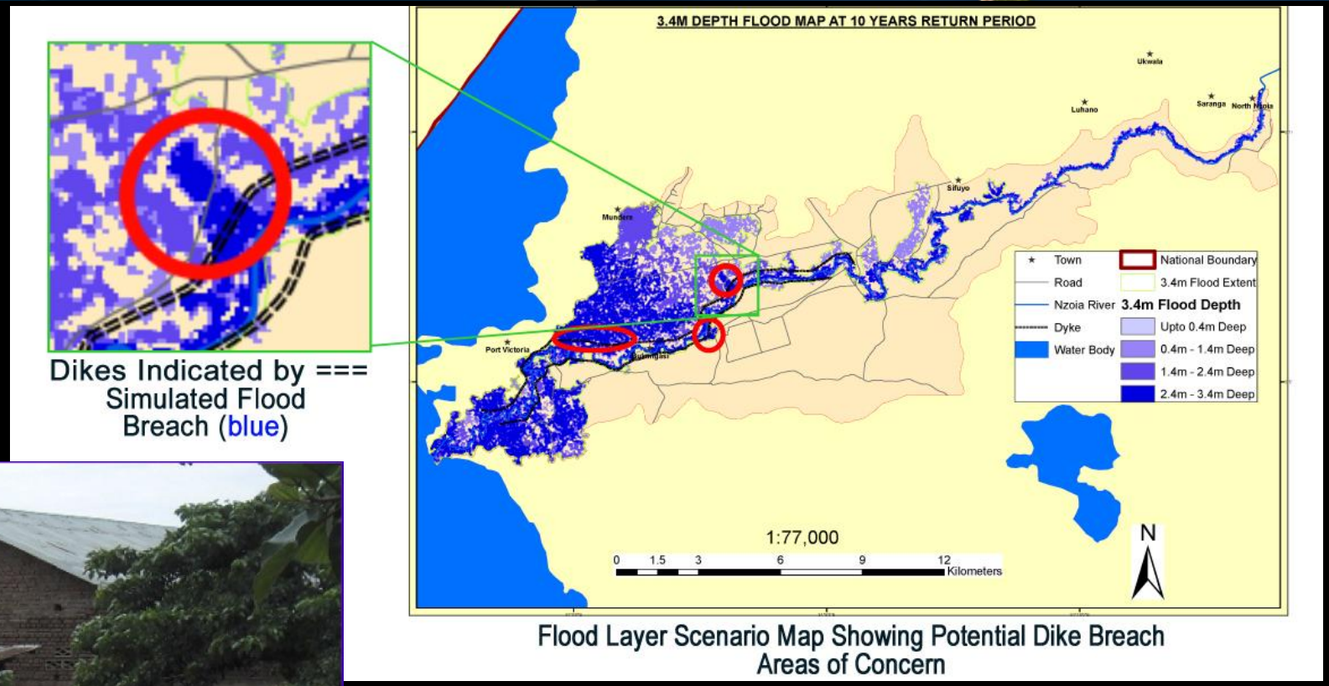
SERVIR-Eastern & Southern Africa
Guiding flood protection in Kenya

Builds on many years of capacity development in hydrology modeling with RCMRD.

Flood Map Tool couples a hydrology model with elevation data to produce flood-scenario maps.



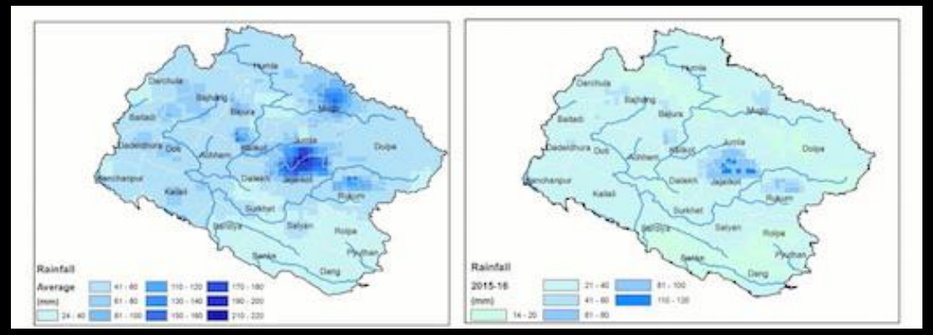
Dikes Indicated by === Simulated Flood Breach (blue)

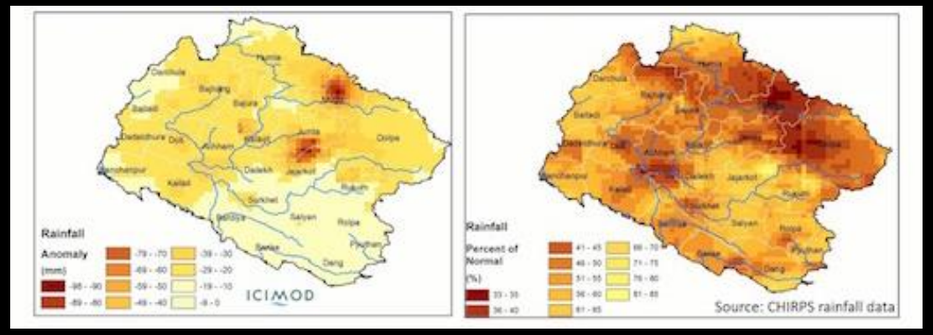
Flood Layer Scenario Map Showing Potential Dike Breach Areas of Concern

"We used the [SERVIR] maps for watershed modeling to help guide repair and construction of flood prevention dikes in Western Kenya."
Peter Muiruri, Technical Manager and Lead Engineer for the World Bank's Water Security and Resilience Project

SERVIR-Hindu Kush-Himalaya
Assisting in directing distribution of food aid in Nepal

ICIMOD regularly provides satellite-derived data and products from NASA and USGS for the World Food Programme's and Nepal's Ministry of Agricultural Development periodic Food Security Bulletins. These help authorities prepare in advance for food shortages, and identify and assist the hungry when shortages occur.



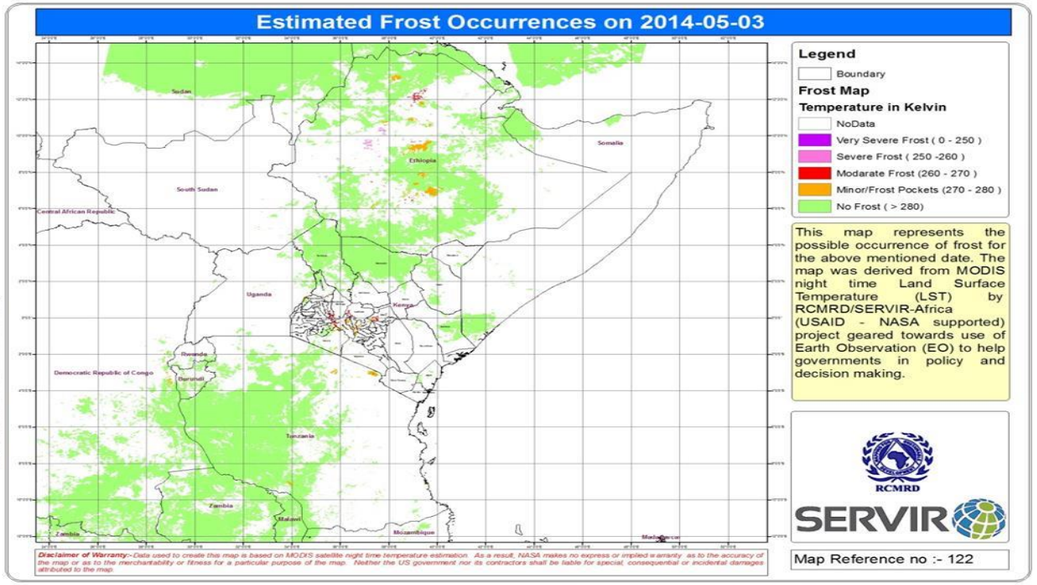


East Africa Frost Monitoring and Forecasting

NASA low cost Wireless Sensor Network for instu temperature, humidity, wind and rainfall Data collection for Frost monitoring calibration

Photos of Frost occurrence in Aberdare Range Lands in Kenya

SERVIR-Eastern and Southern Africa Frost Mapping System automatically generates Frost Occurrence Maps, using real time MODIS Land Surface Temperatures and weather forecast maps



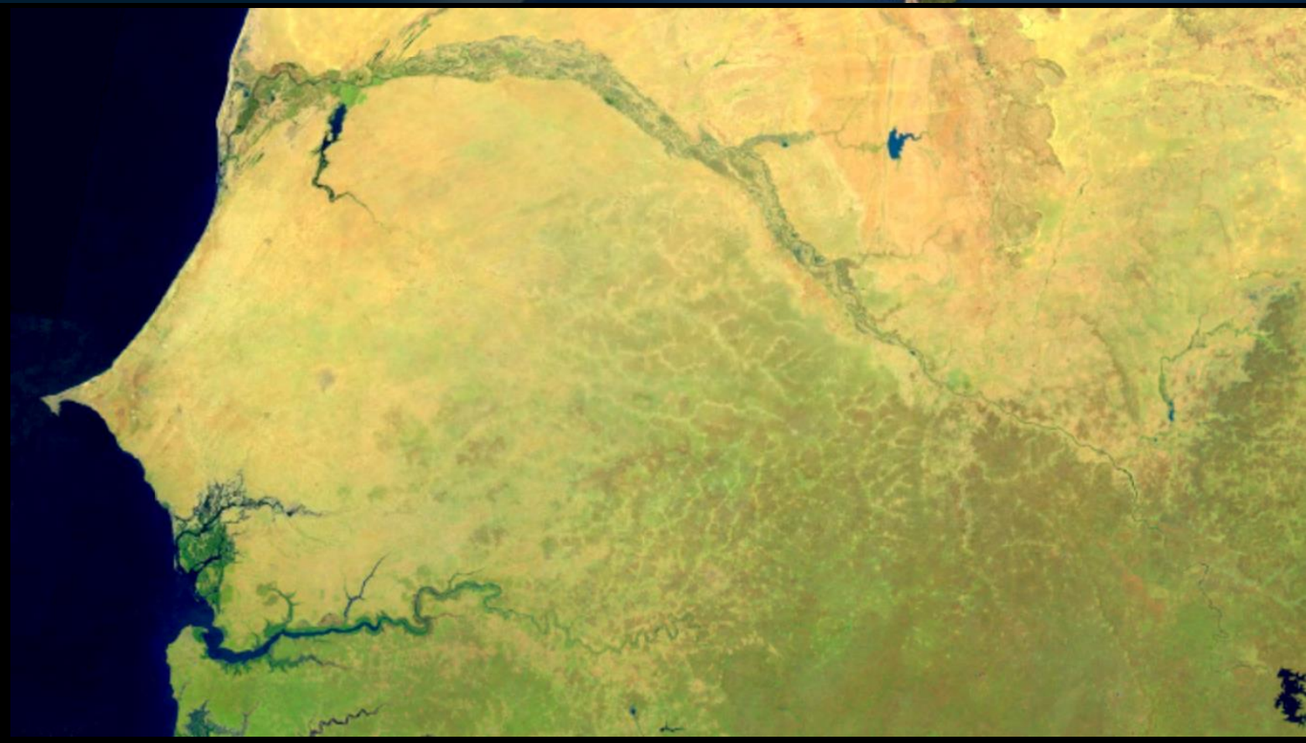
SERVIR partners with RCMRD at SERVIR-Eastern and Southern Africa to address such issues as drought, floods, land cover, and frost. Frost can cause millions of dollars in damage to tea crops, which is a major industry in Kenya and provides a living for about 4 million persons. Farmers can take preventive action against frost if they know where and when it might occur.

SERVIR- Eastern and Southern Africa created an automated, near real-time frost mapping system using satellite and in-situ data. The system emails daily maps identifying areas with high potential for frost to Kenya Meteorological Service, the Tea Research Foundation of Kenya, and others. The two photos were taken during the time SERVIR's frost alert system issued cautions about the frosty conditions outlined in red on the map. Insurances plan to use these maps to adjudicate claims so farmers are reimbursed for losses. SERVIR E&S Africa is also working on a frost forecasting system that could avoid $83 in annual crop losses to smallholder farmers, this equals to 25 days of food for a household.

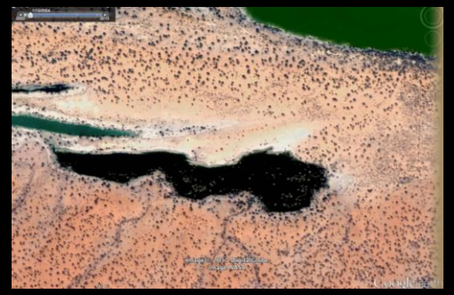
SERVIR-West Africa
Need for regular monitoring of ephemeral water bodies

SERVIR-West Africa consortium leads TetraTech and AGRHYMET, along with consortium member Centre de Suivi Ecologique (CSE) in Senegal, are carefully documenting “needs,” developing stakeholder maps, and designing an information service.

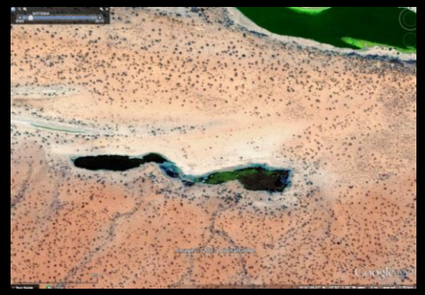
Goal: timely and accurate information on small ponds is made available through existing official channels (agro-pastoral bulletins, extension agencies, Agronomers & Veterinarians Without Borders, etc.), ultimately for improved rangelands management.



May 2003



Jan 2004



Mar 2004

Feb 2013

SERVIR: Working together with people to bring solutions

Thank you!

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Connecting space to village
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